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Cy 3 of 3

6 MAY 1964

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MEMORANDUM FOR THE RECORD

SUBJECT: OXCART Cameras

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1. The following information was obtained from on 24 April 1964:

a. The initial fulfillment of the requirement for cameras for the OXCART vehicle was given to Perkin-Elmer. They proceeded to develop a camera which would be compatible with the extreme environment expected

They developed a vacuum glass situation to protect the cameras from the heat which would be generated at the high speed. Also, since the aircraft was going at this speed, it was felt necessary to devise a special means for film travel. This was accomplished by a special arrangement. Since the film coverage had a panoramic requirement, special equipment was required to accomplish this. These items, as well as others, resulted in what was determined to be a very complicated camera system. In fact, it was so complicated that a decision was made to develop another camera in which the resolution requirement was sacrificed for reliability. Eastman-Kodak took on the job to develop this camera. As a further back-up for the OXCART camera system, a purchase of a modified "U-2" camera was made from Hycon.

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b. A total of six cameras were ordered from Perkin-Elmer, four cameras from Eastman-Kodak, and one camera from These cameras have been delivered or are near delivery. One of the Eastman-Kodak cameras was lost when aircraft #123 crashed. It was determined that a replacement was not necessary. The resolution for the Perkin-Elmer camera is one foot from 90,000 feet; the Eastman-Kodak camera was 1.3 feet from 90,000 feet altitude; and is two to three feet from 90,000. All cameras have functioned within specifications. However, since we have not been able to fly for extended periods at Mach 3.2, it has been impossible to test them in their design environment. There is no indication that any of the systems will not function as designed. Until data are obtained for design environment, no large procurement program is contemplated. Of course, if cameras

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referring to Project OXCART

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function as designed, no additional large procurement program will be required for cameras for the OXCART system.

c. The present efforts for camera support for OXCART is R&D, which could lead to product improvement and, of course, spare parts and support to keep the cameras functioning.

SIGNED

[Redacted Signature]

Programs Staff
(Special Activities)

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PS/OSA: [Redacted] :cec:4526 (5May1964)

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